

WEIGHTS AND AREAS OF COLD ROLLED STEEL SHAFTHING.							
Diameter, Inches.	Area, Square Inches.	Circumference, Inches.	Weight per Foot, Pounds.	Diameter, Inches.	Area, Square Inches.	Circumference, Inches.	Weight per Foot, Pounds.
$\frac{1}{8}$	.0276	.5890	.095	$2\frac{1}{8}$	3.7583	6.8722	12.80
$\frac{1}{4}$	.0491	.7854	.167	$2\frac{1}{4}$	3.9761	7.0686	13.52
$\frac{3}{8}$	.0767	.9817	.260	$2\frac{1}{2}$	4.2000	7.2649	14.35
$\frac{1}{2}$	.1104	1.1781	.375	$2\frac{3}{4}$	4.4301	7.4613	15.07
$\frac{5}{8}$	.1503	1.3744	.511	$2\frac{7}{8}$	4.6664	7.6576	15.89
$\frac{3}{4}$	.1963	1.5708	.667	3	4.9087	7.8540	16.70
$\frac{7}{8}$	.2485	1.7671	.845	$3\frac{1}{8}$	5.1572	8.0503	17.55
1	.3068	1.9635	1.05	$3\frac{1}{4}$	5.4119	8.2467	18.41
$1\frac{1}{8}$	.3712	2.1598	1.26	$3\frac{1}{2}$	5.6727	8.4430	19.31
$1\frac{1}{4}$	.4418	2.3562	1.50	$3\frac{3}{4}$	5.9396	8.6394	20.21
$1\frac{3}{8}$	.5185	2.5525	1.77	$3\frac{7}{8}$	6.2126	8.8357	21.15
$1\frac{1}{2}$	.6013	2.7489	2.05	4	6.4918	9.0321	22.09
$1\frac{3}{4}$	.6903	2.9452	2.35	$4\frac{1}{8}$	6.7771	9.2284	23.06
$1\frac{7}{8}$	.7854	3.1416	2.68	$4\frac{1}{4}$	7.0686	9.4248	24.05
2	.8866	3.3379	3.02	$4\frac{1}{2}$	7.6699	9.8175	26.09
$2\frac{1}{8}$	.9940	3.5343	3.38	$4\frac{3}{4}$	7.9798	10.014	27.16
$2\frac{1}{4}$	1.1075	3.7306	3.77	$4\frac{7}{8}$	8.2958	10.210	28.22
$2\frac{3}{8}$	1.2272	3.9270	4.17	5	8.9462	10.603	30.43
$2\frac{1}{2}$	1.3530	4.1233	4.61	$5\frac{1}{8}$	9.2806	10.799	31.58
$2\frac{5}{8}$	1.4849	4.3197	5.05	$5\frac{1}{4}$	9.6211	10.996	32.73
$2\frac{7}{8}$	1.6230	4.5160	5.52	$5\frac{3}{8}$	10.321	11.388	35.20
3	1.7671	4.7124	6.01	$5\frac{1}{2}$	10.680	11.585	36.40
$3\frac{1}{8}$	1.9175	4.9087	6.52	$5\frac{3}{4}$	11.045	11.781	37.57
$3\frac{1}{4}$	2.0739	5.1051	7.06	$5\frac{7}{8}$	11.793	12.174	39.40
$3\frac{3}{8}$	2.2365	5.3014	7.61	6	12.177	12.370	41.04
$3\frac{1}{2}$	2.4053	5.4978	8.18	$6\frac{1}{8}$	12.566	12.566	42.75
$3\frac{5}{8}$	2.5802	5.6941	8.78	$6\frac{1}{4}$	14.186	13.352	48.26
$3\frac{7}{8}$	2.7612	5.8905	9.39	$6\frac{3}{8}$	15.466	13.941	52.62
4	2.9483	6.0868	10.03	$6\frac{1}{2}$	15.904	14.137	54.11
$4\frac{1}{8}$	3.1416	6.2832	10.69	$6\frac{3}{4}$	17.728	14.923	60.88
$4\frac{1}{4}$	3.3410	6.4795	11.35	$6\frac{7}{8}$	19.147	15.512	65.50
$4\frac{3}{8}$	3.5466	6.6759	12.07	7	19.635	15.708	67.45

Supplement to MACHINERY, February, 1904.

WEIGHT OF A SUPERFICIAL FOOT OF CAST IRON.						WEIGHTS OF NUTS AND BOLT HEADS, IN POUNDS.							
						For Calculating the Weight of Long Bolts.							
Thickness.	Pounds.	Thickness.	Pounds.	Thickness.	Pounds.	Diameter of bolt, in inches..	...	1/4	3/8	1/2	5/8	3/4	7/8
1/4	9.37	3/8	32.81	1 1/2	56.25	Weight of hexagon nut and head .....	...	.017	.057	.128	.267	.43	.73
3/8	14.06	1	37.50	1 5/8	60.93	Weight of square nut and head .....	...	.021	.069	.164	.320	.55	.88
1/2	18.75	1 1/8	42.18	1 3/4	65.62	Diameter of bolt, in inches..	1	1 1/4	1 1/2	1 3/4	2	2 1/2	3
5/8	23.43	1 1/4	46.87	1 7/8	70.31	Weight of hexagon nut and head	1.10	2.14	3.78	5.6	8.75	17	28.8
3/4	28.12	1 3/8	51.56	2	75.00	Weight of square nut and head	1.31	2.56	4.42	7.0	10.50	21	36.4
Computed by W. C. Davids, Rutherford, N. J.						From Kent's Mechanical Engineers' Pocket Book.							

SPECIFIC GRAVITY AND WEIGHT OF METALS.							
	Specific Gravity.	Weight per Cubic Foot, Pounds.	Weight per Cubic Inch, Pounds.		Specific Gravity.	Weight per Cubic Foot, Pounds.	Weight per cubic Inch, Pounds.
Aluminum	2.67	166.5	.0963	Iridium .....	.....	1896.	.8076
Antimony	6.76	421.6	.2439	Iron, Cast-.....	7.218	450.	.2604
Bismuth.....	9.82	612.4	.3454	Iron, Wrought.....	7.70	480.	.2779
Brass—Copper + Zinc.				Lead	11.88	709.7	.4106
80 20	8.60	536.3	.3103	Manganese	8.00	499.	.2887
70 30	8.40	523.8	.3031	Magnesium	1.75	109.	.0641
60 40	8.36	521.3	.3017	Mercury, 60 degrees.....	13.58	846.8	.4900
50 50	8.20	511.4	.2959	Nickel.....	8.8	548.7	.3175
Bronze { Copper 95 to 80.....	.....	.....	.....	Platinum	21.5	1347.0	.7758
{ Tin 5 to 20.....	8.853	552.	.3195	Silver	10.505	655.1	.3791
Cadmium	8.65	539.	.3121	Steel	7.854	489.6	.2834
Copper.....	8.853	552.	.3195	Tin	7.350	458.3	.2652
Gold	19.258	1200.9	.6949	Zinc	7.00	436.5	.2526

Supplement to MACHINERY, February, 1904.